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TITLE: ROCK SIMULATING PEST TRAP

This is a continuation-in-part patent application based on the utility patent application (Serial No. 09/929,779) filed on August 14, 2001 and based on the provisional patent application (Serial No. 60/241,244) filed on October 18, 2000.

BACKGROUND OF THE INVENTION

1. Field of the Invention:

This invention pertains to pest traps, and, in particular, to pest traps designed to be used in outdoor, visible areas.

2. Description of the Related Art:

Most home and business owners would prefer to place pest traps, when needed, outside their residence or business. Because deadly diseases and filthy conditions are often associated with insects and rodents, the placement of traps inside residences and businesses where they may be in plain view of guests or visitors is undesirable.

1 In order to use a pest trap outdoors, a protective outer housing is used which houses
2 the poisoned bait or body-piercing trap. Such traps are disclosed in U.S. Patent Nos.
3 4,541,198, 4,550,525, 4,611,426, 4,730,412, 5,040,327, 5,448,852, and 6,082,042.

4 One drawback of such traps is that the outer housings are relatively large structures
5 that are visible at a distance. Because of the negative connotation associated with insect and
6 rodent traps, most homeowners find the visibility of such traps objectionable. Although the
7 traps may be placed behind other objects or covered with dirt to hide them, this is undesirable
8 because it prevents the trapper from easily checking or retrieving the traps.

9 What is needed is a tamper-resistant, inconspicuous, outdoor pest trap that is
10 effectively disguised as a large object typically found in a garden, such as a rock.

11 12 SUMMARY OF THE INVENTION

13 It is an object of the present invention to provide a pest trap designed for outdoor use.

14 It is another object of the present invention to provide such a pest trap that is tamper-
15 resistant by isolating the poisoned bait or animal trap inside an outer housing to prevent
16 unintentional targets, such as children, pets, and other small animals, from contacting the bait
17 or trap.

18 It is a further object of the present invention to provide a pest trap that is disguised as
19 a large rock, so that it may be placed anywhere in a yard or garden so that customers or
20 neighbors are not privy to the fact that a pest problem may exist.

21 These and other objects of the invention, which will become apparent are met by a
22 tamper-resistant pest trap that has an outer housing that simulates a rock typically found in

1 the garden or a landscape area around a residence or building. The outer housing is a hollow
2 structure with a large cavity formed therein. Located inside the cavity is a holding tray
3 designed to hold a rodenticide or a mechanical trap capable of killing a rodent. Formed on the
4 bottom member of the outer housing are two tunnel cavities that forms two partially
5 concealed tunnels that extend under the outer housing when the outer housing is placed in an
6 upright position on the ground.

7 In the preferred embodiment, the bottom member is substantial flat designed to rest
8 on a flat ground surface. Attached to the bottom member is a dome-shaped lid member. The
9 two tunnel cavities, which are formed on opposites of the center axis of the bottom member,
10 are concave in cross-section and curve rearward and centrally. The perimeter edge of the
11 bottom member adjacent to each tunnel cavity is concaved upward and irregular and designed
12 to slightly overhang the tunnel cavity thereby partially concealing the tunnel from view when
13 the trap is placed on the ground.

14 In the preferred embodiment, the rear edge of the lid member is pivotally attached to
15 the rear edge of the bottom member. The mating perimeter edges of the bottom member and
16 lid member are beveled and so that perimeter edges lid member and bottom member mate
17 thereby allowing them to close evenly with a small gap between them.

18 An optional stake and hold-down chain is provided which are used to securely hold
19 the outer housing on the ground to prevent its movement. An optional key lock is also
20 provided that prevents the lid member from being opened.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of the pest trap disclosed herein, simulating a natural rock located in a landscape area.

Fig. 2 is a right side perspective view of the invention.

Fig. 3 is a left side perspective view of the invention.

Fig. 4 is a front elevational view of the invention.

Fig. 5 is a rear elevational view of the invention.

Fig. 6 is a left side elevational view of the invention.

Fig. 7 is a right side elevational view of the invention.

Fig. 8 is a top plan view of the invention.

Fig. 9 is a bottom plan view of the invention.

Fig. 10 is a perspective view of the invention showing the lid member in an open position over the bottom member.

Fig. 11 is a top plan view of the invention showing in Fig. 10.

DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

Referring to Fig. 1-11, there is shown and described a pest trap 10 designed to simulate a rock in a garden or landscape area 100. The pest trap 10 includes a substantially flat bottom member 12 and a dome-shaped upper lid member 70. The bottom member 12 and lid member 70 are complimentary in shape so that when the lid member 12 is aligned and registered over the bottom member 70, a simulating three - dimensional rock-shaped structure.

1 Formed on opposite sides of the bottom member 12 are two, inward extending tunnel
2 cavities 18, 23. Each tunnel cavity 18, 23 are concave in cross-section and curves slightly
3 rearward and centrally on the bottom member 12. When the trap 10 is placed on the ground
4 101, the tunnel cavities 18, 23 form two tunnels 20, 25 on opposite sides of the outer housing
5 11 that leads into a large cavity 65 formed inside the structure. The perimeter edge of the
6 bottom member 12 adjacent to each tunnel cavity 18, 23 is irregular and concave thereby
7 forming an outside pest opening 17, 23 into the adjacent tunnel cavity 18, 23, respectively.

8 Formed centrally on the bottom member 12 and over the adjacent tunnel cavity 18 or
9 23 is a substantially circular large inside pest opening 19 or 24, respectfully. When the pest
10 trap 10 is placed on the ground, a rodent 102 passes through one of the tunnels 20 or 25 and
11 through the inside pest opening 19 or 24, respectively, to enter the large cavity 65. In the
12 preferred embodiment, the two inside pest openings 19, 24 are located on opposites sides of
13 the center axis of the bottom member 12 so that a rodent 102 when passing through one
14 inside pest opening 19 or 24 has an unobstructive view of the opposite inside pest opening 19
15 or 24. The inventor postulates that rodents 102 are more likely to enter the large cavity 65 if
16 an alternative escape route such as the opposite inside pest opening is viewable by the rodent
17 102.

18 As shown more clearly in Fig's 10 and 11, formed centrally on the top surface 16 of
19 the bottom member 12 is a holding tray 30 designed to hold a rodenticide bait 96 or a
20 mechanical trap 97 capable of killing a rodent 102. In the preferred embodiment, the holding
21 tray 30 is centrally aligned on the top surface 16 between the two inside pest openings 19, 24.
22 The holding tray 30 is rectangular and includes four sidewalls 32-34 with two vertically

1 aligned slots 35, 36 formed on two opposite sidewalls 32, 34. During assembly, a rod 37
2 attached to bait 96 is placed between the two slots 35, 36 to hold bait 96 inside the holding
3 tray 30.

4 Also formed behind the holding tray 30 is a bait paper tray 40 designed to hold bait
5 paper 98 commonly used against insects and slugs. The bait paper tray 40 is square or
6 rectangular with four short sidewalls 41-44 designed to hold one or two sheets of replaceable
7 bait paper 98.

8 In the preferred embodiment, the lid member 70 is pivotally attached along one edge
9 to the bottom member 12. As shown in Figs 5 and 9 -11, the bottom member 12 includes an
10 elevated, rearward extending, horizontal hinge plate 50 formed adjacent to the bottom
11 member's rear edge. Formed on the hinge plate 50 are four parallel slots 52. Each slot 52
12 extends rearward and includes a transversely aligned axle 53. Located on the opposite ends
13 of the hinge plate 50 are two vertically aligned guide plates 51 used to align the lid member
14 70 on the bottom member 12 when the lid member 70 is closed over the bottom member 12.
15 Formed on the lid member 70 adjacent to the rear wall of the lid member 70 are four arms 72.
16 The arms 72 are aligned and registered with the four slots 52 formed on the hinge plate 50.
17 Each arm 72 includes a receiving slot 73 designed to receive the axle 53 on an adjacent slot
18 52 formed on the hinge plate 50 to pivotally attach the lid member 70 to the bottom member
19 12.

20 In the preferred embodiment, the bottom member 12 and lid member 70 are made of
21 1/8 inch cross-linked polyurethane and is gray in color with black flakes to simulate a "one"
22 to "three man" size granite rock. When the lid member 70 is closed on the bottom member

12, the pest trap 10 measures approximately 15 inches in length, 11 inches in width, and 6 inches in height, and weighs approximately 2 lbs. In the preferred embodiment, the two tunnel cavities 18, 23 are approximately 2-1/2 inches in width and 2 inches in height and 3 to 6 inches in length. The outer pest openings 17, 22 to the two tunnel cavities 18, 23, respectfully, are concave and ragged and measure approximately 7 inches in length and 2 inches in height at the apex. Each tunnel cavity 18, 23 are approximately 8 inches in length, 4 inches in width and 3 inches in height. The inside pest openings 18, 24 are approximately 3 inches in diameter.

The pest trap 10 may be held in place on the ground 40 by an optional stake 66 that extends through a hole 67 located centrally on the bottom member 12 to hold the pest trap 10 to the ground 40. In the preferred embodiment, the stake 66 is a round rod approximately 1/4 inch in diameter and 10-16 inches in length which maybe easily driven into the ground.

Formed near the front edge of the bottom member 12 are two hollow posts 46, 48 designed to receive two vertically aligned pegs 80, 81 located near the front edge of the lid member 70. The posts 46, 48 and pegs 80, 81 are aligned and registered so that the pegs 80, 81 extend into the opening 47, 49 formed in the posts 46, 48, respectfully, the lid member 70 is closed over the bottom member 12.

Disposal between the bottom member 12 and the lid member 70 is an optional key locking mechanism 82. In the preferred embodiment, shown more clearly in Fig's 10 and 11 the locking mechanism 82 includes a rearward biased latch 84 vertically aligned and attached to the lid member 70. A clasp 88 is attached to the lid member 12. The clasp 88 includes a receiving space 89 designed to receive two rearward aligned teeth members 85, 86 formed on

1 the inside surface of the latch 84. An optional key 90 is provided that extends through a
2 keyhole 83 formed on the front surface of the lid member 70. During use, the pest control
3 operator inserts the complimentary shaped key 90 into the keyhole 83 and engages the latch
4 84 to pull the latch 84 forward to disengage the teeth members 85, 86 latch 84 from the
5 receiving spaced 89 formed on clasp 88. Formed inside the bottom member 12 is an optional
6 recording sheet holder 110. The holder 110 includes a slot 112 designed to receive a report
7 card 114 to be filled out by the pest trap operator.

8 During use, the pest trap 10 is set up on a flat section of ground 40. The bait 96 or trap
9 97 is placed in the holding tray 30. Alternatively, the bait paper 98 maybe placed inside the
10 bait tray 40. Rodents 102 or insects 103 are attracted to the smell of the bait 96 or paper 98
11 located in the holding trays 30 or 40. The rodent 102 or insects 103 pass through one of the
12 two outer pest openings 17, 22 to enter the tunnel 20 or 25. The rodent 102 or insects 103
13 then work through the tunnel 20 or 25 and into the large cavity 65 through one of the inside
14 pest openings 17 or 24. Once the rodent 102 enters the large cavity 65 it has access to the
15 bait 96 or to the tray 97 located in the holding tray 30. The insects have access to the bait
16 paper 98. The rodent 102 eats the bait 96 or activates the trap 97 while the insects 103 adhere
17 to the bait paper 98. The operator of the pest trap 10 then opens the trap to gain access to the
18 large cavity 60 to remove the dead rodent 102 or insects 103 from the trap 10, then adds more
19 bait 96, re-set's the trap 97 or replaces the bait paper 98. The operator then selects the report
20 card 114 and records the activities. The report card 114 is then replaced back into the holder
21 110. The lid member 70 is then closed and locked on the bottom member 12.

1 In compliance with the statute, the invention described herein has been described in
2 language more or less specific as to structural features. It should be understood, however,
3 that the invention is not limited to the specific features shown, since the means and
4 construction shown, comprised only of the preferred embodiments for putting the invention
5 into effect. The invention is therefore claimed in any of its forms or modifications within the
6 legitimate and valid scope of the amended claims, appropriately interpreted in accordance
7 with the doctrine of equivalents.